Quality of life for patients with cardiovascular diseases

(Jakość życia chorych na choroby sercowo-naczyniowe)

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Abstract – Introduction. Among cardiovascular diseases, ischaemic heart disease is also often called coronary artery disease. It is an insidious disease because it does not give any noticeable symptoms at the initial stage. It brings with it limitations which hinder everyday functioning, which translates into a decrease in the quality of life of patients affected by this disease. This is why preventive action and preventing the development of cardiovascular diseases is so important.
The aim of the study. The aim of the study is to analyze the quality of life of patients with selected cardiovascular diseases (coronary artery disease, cardiomyopathy, hypertension, myocardial infarction, arrhythmia) using the SF-36 (Short Form Health Survey).
Materials and methods. The study involved 106 people with cardiovascular diseases. The SF-36 questionnaire was used in the study.
Results and conclusions. The respondents assessed their overall health as good. The most restrictions are activities that require a lot of energy. In the majority of respondents, pain did not interfere with normal work and occurred to a small extent. The emotional state of the respondents affected their interpersonal contacts only for some time.

Key words - quality of life, cardiovascular diseases, quality of life questionnaire SF-36.

Streszczenie – Wstęp. Wśród chorób sercowo-naczyniowych choroba niedokrwienna serca zwana jest też często chorobą wieńcowa. Jest to choroba podstępna gdyż w początkowej jej fazie nie daje żadnych zauważalnych objawów. Niesie ze sobą ograniczenia, które utrudniają codzienne funkcjonowanie co przekłada się na obniżenie jakości życia chorych dotkniętych tą chorobą. Dlatego tak ważne jest działanie prewencyjne i niedopuszczenie do rozwoju chorób układy krążenia.
Cel pracy. Celem pracy jest przy wykorzystaniu kwestionariusza oceny jakości życia SF-36 (Short Form Health Survey) przeanalizowanie jakości życia chorych na wybrane choroby sercowo-naczyniowe (choroba wieńcowa, kardiomiopatia, nadciśnienie tętnicze, zawał serca, zaburenia rytmu).
Materiał i metody. W badaniu udział wzięło 106 osób, u których występowały choroby sercowo-naczyniowe. W pracy wykorzystano kwestionariusz SF-36.
Wyniki i wnioski. Badani ocenili ogólny stan swojego zdrowia jako dobry. Najwięcej ograniczeń stanowią czynności wymagające dużej ilości energii. U większości badanych ból nie zakłócał normalnej pracy i występował w niewielkim stopniu. Stan emocjonalny ankietowanych wpływał na kontakty interpersonalne jedynie przez część czasu.

Słowa kluczowe – jakość życia, choroby sercowo-naczyniowe, kwestionariusz jakości życia SF-36.

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I. INTRODUCTION

The main cause of mortality in Poland is cardiovascular disease. Knowledge of the causes of these diseases is the basis for introducing effective preventive measures. The most frequent risk factors include: lipid disorders, hypertension, obesity, smoking. They are responsible for the process of atherosclerosis, the main cause of cardiovascular diseases. [1-5]

Nowadays, interest in the quality of life is constantly increasing. It would seem that the concept only covers the psychological and medical sphere, but it has a much broader scope. Research on quality of life has been and still is the focus of many researchers. [6-9]

The aim of the study is to analyze the quality of life of patients with selected cardiovascular diseases (coronary artery disease, cardiomyopathy, hypertension, myocardial infarction, arrhythmia) using the SF-36 (Short Form Health Survey).

II. MATERIALS AND METHODS

Material

The study involved 106 people with cardiovascular diseases. The characteristics of the studied group are presented in tables 1 and 2.

Table 1. Characteristics of the test group

Factor	Factor categories	Number	%
Gender	Woman	66	62
	Male	40	38
Age	30-45 years	28	26
	45-60 years	30	28
	60-75 years	34	33
	powyżej 75 years	14	13
Education	Professional	34	32
	Junior High School	17	16
	Average	31	29
	Higher	24	23
Place of residence	The village	61	58
	City	45	42

Table 2. Cardiovascular diseases diagnosed in the respondents

Suggestions for responses	Timetable of responses	
	Number	%
coronary artery disease	22	19
hypertension	66	58
heart rhythm disorders	2	2
cardiomyopathy	4	4
myocardial infarction	13	12
other cardiological diseases	6	5
Total	**113**	**100**

Methods

The test method was a diagnostic survey. The tool was the SF-36 (Short Form Health Survey), whose Polish version was developed in 1998. at the Institute of Cardiology in Anin. The questionnaire consists of 11 questions, which concern: physical functioning, limitations related to physical health, pain, generalised sense of health, vitality, emotional and social functioning and mental health.[8-10] The first part of the questions relates to the definition of sociodemographic data such as: gender, age, education, place of residence. (Annex 1 - questionnaire). Participation in the research was random, voluntary and anonymous. The research was conducted in the period from 01.05. 2020 to 01.06.2020.

Statistical analysis

All the results were analyzed using Microsoft Office Excel 2010. The results were presented using: Pearson's chi2 test - to examine the statistical relationship of the two elements to each other. The materiality level was set at p=0.05, which corresponds to a statistical error (5%).

III. RESULTS

Distribution of answers to the questionnaire

Question: When were you diagnosed with a cardiovascular disease?

In 32% of respondents, cardiovascular disease 2-5 years ago, in 29% - 5-10 years ago. The distribution of answers is presented in Table 3.

Table 3. Distribution of answers to the question: *When were you diagnosed with a cardiovascular disease?*

Suggestions for responses	Timetable of responses	
	Number	%
less than a year ago	22	18
two to five years ago	38	32
five to ten years ago	34	29
more than ten years ago	25	21
Total	**119**	**100**

Question: How do you assess your health compared to the same period last year?

29% of those surveyed assessed their health status as slightly worse compared to a similar period last year, and 28% as very similar. The distribution of answers is presented in Table 4.

Table 4. Distribution of answers to the question: *How do you assess your health compared to the same period last year?*

Suggestions for responses	Timetable of responses	
	Number	%
much better than a year ago	20	17
a little better than a year ago	22	18
very much like a year ago	33	28
slightly worse than a year ago	34	29
much worse than a year ago	10	8
Total	**119**	**100**

Question: In general, you can say that your health is…?

29% of those surveyed assessed their health status as slightly worse compared to a similar period last year, and 28% as very similar. The distribution of answers is presented in Table 5.

Table 5. Distribution of answers to the question: *In general, you can say that your health is …?*

Suggestions for responses	Timetable of responses	
	Number	%
excellent	10	9
very good	22	21
good	37	35
satisfactory	20	19
unsatisfactory	17	16
Total	**106**	**100**

Question: Does your health currently limit your ability to do so? If so, how much?

50% of the respondents reduce the most energy-intensive activities, 53% slightly reduce activities of moderate difficulty. The distribution of answers is presented in Table 6.

Table 6. Distribution of answers to the question: *Does your health currently limit your ability to do so? If so, how much?*

Suggestions for responses	Timetable of responses							
	Very (numer)	%	A little (numer)	%	At all (numer)	%	Total (numer)	%
activities requiring energy	53	50	41	40	11	10	105	100
activities of moderate difficulty	24	23	57	53	25	24	106	100
lifting or carrying of loads	31	29	51	48	24	23	106	100
climbing several floors of stairs	25	24	54	51	27	25	106	100
climbing one floor of stairs	20	19	47	45	38	36	105	100
bending or kneeling	23	22	43	41	40	37	106	100
walk longer than 1 km	21	20	42	40	42	40	105	100
walk about 500 m	23	22	37	35	45	43	105	100
walk about 100 m	16	15	37	35	53	50	106	100
bathing or dressing	16	15	37	35	53	50	106	100
Total	252	24	446	42	358	34	1056	100

Question: Have you had problems with your work or daily activities in the last month which were due to your health and caused?

55% of the respondents felt worse than expected, 59% had no restrictions on the type of work or other activities. The distribution of answers is presented in Table 7.

Table 7. Distribution of answers to the question: *Have you had problems with your work or daily activities during the last month that were due to your health condition and caused?*

Suggestions for responses	Timetable of responses					
	Yes (numer)	%	No (numer)	%	Total (numer)	%
the need to reduce working time or other activities	48	45	58	55	106	100
worse than expected well-being	55	52	50	48	105	100
restriction in the type of work or other activities	43	41	63	59	106	100
obstruction of work or other activities	47	45	58	55	105	100
Total	193	46	229	54	422	100

Question: Have you had problems with your work or daily activities in the last month due to emotional problems?

42% of those surveyed felt problems in terms of under-achievement than expected, 66% did not feel inability to perform work or other activities as carefully as usual. The distribution of responses is presented in Table 8.

Table 8. Distribution of answers to the question: *Have you had problems with your work or daily activities in the last month due to emotional problems?*

Suggestions for responses	Timetable of responses					
	Yes (number)	%	No (number)	%	Total (number)	%
reduction of working time or other activities	42	40	64	60	106	100
less than expected	44	42	62	58	106	100
inability to perform work or other activities as carefully as usual	36	34	70	66	106	100
Total	122	38	196	62	318	100

Question: In the last month, have you had health or emotional problems affecting ordinary activities, contacts with family, friends, neighbours or other groups?

For 33% of those surveyed, health or emotional problems sometimes had an impact on ordinary activities and contacts, and for 25%, there was no such impact. The distribution of answers is presented in Table 9.

Table 9. Distribution of answers to the question: *Have you had any health or emotional problems during the last month, affecting normal activities, contacts with family, friends, neighbours or other groups?*

Suggestions for responses	Timetable of responses	
	Number	%
no, not at all	26	25
seldom	17	16
sometimes	35	33
even so	14	13
very large	14	13
Total	106	100

Question: How many times have you felt pain over the last month?

33% of respondents have rarely felt pain in the last month, 21% have felt it very rarely. The distribution of answers is presented in Table 10.

Table 10. Distribution of answers to the question: *How many times have you felt pain during the last month?*

Suggestions for responses	Timetable of responses	
	Number	%
never	18	17
very rarely	22	21
seldom	35	33
very often	16	15
often	15	14
Total	106	100

Question: How many times have you had a symptom in the last month?

23% of respondents were full of animosity in the last month, 36% were happy most of the time, 29% full of energy. The distribution of answers is presented in Table 11.

Table 11. Distribution of answers to the question: *How many times has a given symptom occurred to you in the last month?*

Suggestions for responses	Timetable of responses													
	All the time	%	A lot of time	%	Not much	%	Most of the time	%	Some time	%	Not at all	%	Total	%
full of animosity	24	23	14	13	21	20	11	10	20	19	16	15	106	100
very upset	4	4	30	29	22	21	20	19	19	18	9	9	104	100
the feeling of being unbelievable and nothing will comfort you	11	11	15	15	21	20	29	27	16	16	11	11	103	100
calm and tranquil	7	7	15	15	29	28	27	26	14	14	10	10	102	100
full of energy	8	8	11	11	35	34	29	27	17	16	4	4	104	100
broken down and sad	7	7	15	14	31	30	21	21	16	15	14	13	104	100
wasted	6	6	16	15	30	28	26	24	20	19	8	8	106	100
happy	6	6	15	14	21	20	37	36	21	20	4	4	104	100
tired	8	8	13	12	30	28	25	24	27	25	3	3	106	100
Total	81	9	144	15	240	26	225	24	170	18	79	8	939	100

Question: How true or false are the following statements?

18% of respondents said that their health was better than that of other people, 29% thought that they were healthier than other known people and thought that their health would deteriorate. The distribution of responses is shown in Table 12.

Table 12. Distribution of answers to the question: *How true or false are the following statements?*

Suggestions for responses	Timetable of responses											
	Especially true (number)	%	Sometimes true (number)	%	I do not know(number	%	Sometimes fake(numer)	%	Especially false(numer)	%	Total (numer)	%
better health than others	20	18	25	24	18	17	25	24	18	17	106	100
healthier than other people I know	7	7	29	27	26	25	33	31	11	10	106	100
I suppose the state of health will deteriorate	15	14	29	27	38	36	19	18	5	5	106	100
health is excellent	8	8	26	25	23	22	32	30	17	15	106	100
Total	50	11	109	26	105	25	109	26	51	12	424	100

Question: How often over the last month has pain disturbed your normal work (professional and domestic)?

25% of people in pain over the past month have been disrupting their work, 23% have not. The distribution of answers is presented in Table 13.

Table 13**.** Distribution of answers to the question: *How often during the last month has pain disturbed your normal work (professional and domestic)?*

Suggestions for responses	Timetable of responses	
	Number	%
not at all	25	23
on average	26	25
very	22	21
a little	22	21
even very	11	10
Total	106	100

Question: How often has your physical health or emotional state affected your social contacts (meetings with family and friends) during the last month?
34% of the respondents had physical or emotional health or state of mind in the last month for some time, while 28% had no influence at all. The distribution of answers is presented in Table 14.

Table 14. Distribution of answers to the question: *How often has your physical health or emotional state affected your social contacts (meetings with family and friends) during the last month?*

Suggestions for responses	Timetable of responses	
	Number	%
all the time	15	13
part of the time	36	34
not at all	29	28
most of the time	18	17
not much time	8	8
Total	106	100

IV. DISCUSSION

Nowadays, interest in the quality of life is constantly increasing. This concept has been introduced to modern medicine by Schipper, who has determined that a state of health is the result of illness and its treatment. They are subjectively or objectively perceived by the patient. In medical science, quality of life is linked to health, so health is a basic prerequisite. Disease undeniably affects the quality of life, reducing it more or less. [11]
The respondents assessed their health as good. The restrictions that are related to their health are mainly related to activities that require energy. Much less restrictions are experienced when performing activities such as walking 100 metres, swimming or dressing. The results obtained are different from the results of the tests carried out in the Consultative Cardiology and Cardiac Surgery Specialist Clinic in Krakow. The examination covered 61 patients after the CABG procedure. Thanks to the research it was observed that after the procedure the ability to perform daily activities improved. These patients also had less difficulties in performing activities that require considerable and also little effort. [12]

The own research showed that the respondents were full of animosity and happy most of the time. For a short time they were full of energy and often nervous. Mental health and emotional state of the respondents often disturbed their interpersonal contacts. Humańska and Kędziora-Kornatowska -believe that de-

pressive disorders have a significant impact on the quality of life, especially of elderly people. The study was carried out with the participation of 100 people. They are 65 years old and older. There is a significant correlation between the emotional mood of the elderly and their sense of quality of life. As depression increases, quality of life deteriorates. [13] The assessment of depressive disorders was also carried out by Nowicka A. The assessment concerned both the cognitive processes and quality of life of patients who underwent cardiac surgery using extracorporeal circulation. The study involved 39 people who had their cardiac surgeries performed in Białystok. All the surgeries may constitute a significant emotional disorder, which in consequence leads to an increased risk of depression in some groups of patients. The research confirmed this assumption. Procedures of this type have caused an increase in depressive disorders, which are connected with lowering the quality of life after surgery. [14]

V. CONCLUSIONS

- The overall health assessment is good. Health significantly reduces energy-intensive activities, while very small restrictions are experienced when walking 100 metres and when bathing or dressing. There are partial problems with work and everyday health-related activities, while the emotional state has virtually no impact on work and daily activities. Most of the respondents feel little pain. Hypothesis 2 should be accepted in part.
- The assessment of general health affects the reduction of daily activities, problems with work and daily activities for health reasons and the frequency of disruption of work by pain.
- Pain does not interfere with normal work in the majority of the respondents, and pain is also minor in the majority of the respondents.
- Most of the time the respondents were full of animosity, happy, but for a short time they were full of energy and often nervous. For part of the time, mental health and emotional state influence interpersonal contacts.

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